- Ageikin, D. I., L. V. Mel'ttser and N. N. Shumilovskii.

  Modulation of Radioactive Emissions in Automatic

  Measuring Devices 741.
- Aizerman, M. A. and F. R. Gantmakher. Determination of Periodic Modes in Systems with Piecewise-Linear Characteristics, Composed of Segments Parallel to Two Specified Straight Lines. I. 105.
- Determination of Periodic Modes in Systems with Piecewise-Linear Characteristics Composed of Segments Parallel to Two Specified Lines, IL -213.
- Some Aspects of the Switchovers in Nonlinear Automatic Control Systems with Piecewise-Smooth Nonlinear Element Characteristics - 1065.
- Aleskerov, S. A. Calculations on Electromagnetic Systems Using Electrical Analogs - 815.
- Andreev, N. I. Definition of an Optimal Linear Dynamic System from an Extremum Criterion Applied to a Particular Form of Functional - 665.
- Andriushchenko, V. A. Comments on A. V. Maiorov's Article "Raising the Operational Safety of Automatic Controls." (Automation and Remote Control, 16, 5, 1955) 99.
- Astapov, Iu. M. Diagram for Determining the Real Frequency Characteristic from Open-Loop Logarithmic Characteristic of an Automatic-Regulation System 307.
- Aven, O. I. Reducing the Lag of Magnetic Amplifiers by Introducing Derivative Feedback 191.
- Baida, L. I. and V. K. Zakharov. Choice of Mode and Calculation of Electronic Voltage Stabilizer -778.
- Bakhmet'ev, M. M. and R. R. Vasil'ev. Information Criteria for Evaluating Telemetering Systems -
- Batkov, A. M. and Solodovnikov, V. V. A Method of Determining the Optimum Characteristics for One Class of Self-Adapting System 411.
- Belevich, K. V., V. P. Demeshin, R. A. Il'in and G. B. Suvorov. A Radio Remote Control System for Oil Fields 979.
- Bendrikov, G. A. and K. F. Teodorchik. The Theory of Derivative Control in Third-Order Linear Systems - 515.
- Berezin, S. Ia. Improving the Dynamic Properties of Automatic Regulation Systems with the Aid of Aperiodic Feedback - 253.
- Boiarchenkov, M. A. (see Vasil'eva, N. P.) 715.
  Brodovich, N. I. Transients in a Transistor Switching
  Circuit 299.
- Brodskii, V. B. A Phase Method Using Ultrashort Waves for Measuring the Level of a Liquid Automatically - 695.

- Bul', B. K. Design of Magnetic Circuits and AC Coils in Accordance with Set Parameters 962.
- Cheme, Kh. I. Atabekov's Book "Harmonic Analysis and the Operator Method." - 1191,
- Demeshin, V. P. (see Belevich, K. V.) 979.
- Dmitriev, V. N. Improvement of the Static Characteristic of a Pneumatic Relay by Means of Flow Restrictors of Constant Pressure Drop - 744.
- Dolgolenko, Iu. V. The Approximate Derivation of Partial "Sliding" Periodic Modes in Relay Control Systems - 1.
- Domanitskii, S. M. (see Kulebakin, V. S.) 151.

  Dostupov, B. G. Approximate Determination of the

  Output Coordinate Probability Characteristics
- and V. S. Pugachev. The Equation for Determining the Distribution Law for the Integral of a System of Ordinary Differential Equations Containing Random Parameters - 671.

for Nonlinear Automatic Control Systems - 1045.

- Druzhinin G. V. Operational Design of Reliability in Systems Containing Many Elements 733.
- A Method of Calculating the Operational Reliability of Apparatus - 1179.
- Emel'ianov, S. V. A Method of Producing Complex Control Laws Using Only the Error Signal or Controlled Coordinate Plus their First Derivatives -921.
- Evseev, V. M. An Operational Amplifier Without Stabilized Power Supplies 467.
- Fel'dman, A. A. (see Medvedev, L. V.) 945.
- Fitsner, L. N. (see Medvedev, L. V.) 945.
- Fomina, E. N. Leningrad Seminar on Automatic Control Theory (1955-6) - 991.
- Gantmakher, F. R. (see Aizerman, M. A.) 105, 213, 1065.
- Gerkhen-Gubanov, G. V. Investigation of Simplest Relay Servo System - 247.
- Glatenok, I. V. Evaluation of the Region of the True Periodic Solution Found Approximately by the Harmonic Balance Method - 1175.
- Gorskii, V. V. A Three-Phase Magnetic Amplifier 736.
- A Relay Automatic Position Control System Using a Compound-Wound Motor- 832,
- Grigorian, L. A. Block Diagrams for Magnetic Amplifiers with "Hard" and "Soft" Feedback Loops = 603.
- Gushchin, Iu. V., L. V. Mel'ttser, M. I. Tolokonnikov and N. N. Shumilovskii. Use of Radioactive Emission in Automatic Control Devices - 863.
- Iakubaitis, E. A. Analytic Expression for the Static Characteristic of the Measuring Element of a Choke Regulator - 293.

- Il'in, V. A. The Layout of Telemechanics Lines with Distributed Objects - 708.
- -(see Belevich, K. V.) 979.
- Inosov, V. L. Remarks on an Article by A. A. Pervozvanskii 309.
- Ionkin, P. A. The Computation of Nonlinear Networks by the Method of Transformation (Transfiguration) and a Certain Error which Arises in the Application of this Method - 620.
- Kaluzhnikov, N. A. Simplified Calculations for Magnetic Amplifiers with Iron – Nickel Alloy Corres - 287.
- Circuit Design for AC Magnetic Amplifiers 843.
- Kashirin, V. A. Noise Stability of Frequency Modulated Systems - 572.
- Kazakov, V. P. Study of Pulsed Contactor Automatic Control System Dynamics - 37.
- Certain Problems in the Construction of Multichannel Automatic Regulation Systems - 357.
- Kharybin, A. E. Analysis of Errors in the Determination of the Average Value of a Random Quantity and of its Square, Due to Finite Time of Observation 335.
- Khokhlov, V. A. The Motion of a Loaded Hydraulic Actuator with a Feedback Loop 823.
- Throttle-Controlled Hydraulic Amplifiers 982.
- Kichin, I. N. Determination of Hydraulic Loss Coefficients in Throttle Resistances in Hydraulic Systems - 87.
- Some Methods of Stabilization and Control of Low Flow Rates of Operating Liquid in Hydraulic Automatic Systems - 757.
- Kilin, F. M. Transient and Steady-State Processes in Pulse Systems with Abruptly-Changing Variable Parameters - 1109.
- Klugman, I. Iu. and Ia. L. Litmanov. Letter to the Editor 409.
- Kogan, B. Ia. Evaluation of Electronic Integrators -888.
- Korolev, N. A. Pulse Stabilization of Relay Automatic Control Systems - 435.
- Kotel'nikov, V. A. Use of Memory Device to Improve the Stabilization of Automatic-Regulation Systems with Limited Servo Motor Speed - 321.
- Koval', N. S. Seminar on the Engineering Applications of Mathematical Logic (1955-7) 995.
- Kozlov, G. D. A Magnetic Relay Using Ferrites 894.
  Krasovskii, A. A. Two-Channel Automatic Regulation
  Systems with Antisymmetric Cross Connections 139.
- Krasovskii, N. N. On the Theory of Optimum Regulation 1005.
- Krug, E. K. and O. M. Minina. The Effect of Certain Nonlinear Characteristics in the Elements of an Isodrome Regulator on the Transient Response of an Automatic Control System - 932.

- Kulebakin, V. S. and S. M. Domanitskii. Speed Regulation of Three Phase Induction Motors Using a Bridge-Type Transducer - 151.
- Kurakin, K. I. The Design of Linear Follower Systems from the Criterion of Minimum Practical Limiting Reproduction Error - 447.
- Kutin, B. N. On the Calculation of the Correlation Function of a Stationary Random Process from Experimental Data - 221.
- Leonov, Iu. P. and L. A. Tel'ksnis. Determination of the Distribution Law Parameters for a Random Function from Limited A Priori Data 1032,
- Letov, A. M. Conditionally Stable Controlled Systems (One Class of Optimal Controlled System) - 649.
- Lipman, R. A. and I. B. Negnevitskii. Theory of the Halfwave Magnetic Amplifier. I. - 381.
- Theory of the Halfwave Magnetic Amplifier. II 491.
- Litmanov, Ia. L. (see Klugman, I. Iu) 409.
- Maiorov, A. V. Increasing the Reliability of Automatic Regulators 1189.
- Makarov, I. M. Analytical Investigation of the Stability of an Electromechanical Converting Device 347.
- Makler, Ia. I. Transients in Contactor Systems 63.
- Margolis, N. M. Some Comments on Maiorov's Paper 1186.
- Maslov, A. A. Multiplying and Dividing Device Employing Thyrites 367.
- Matveev, P. S. A Method of Determining Desired Log Frequency Characteristics 75.
- Medvedev, L. V., A. A. Fel'dbaum and L. N. Fitsner. Single-Input Nonlinear Converters -. 945.
- Meerov, M. V. On the Synthesis of Structures of Multiple-Looped Control Systems Including Elements with Lags 1146.
- Mel'ttser, L. V. (see Ageikin, D. I.) 741.
- (see Gushchin, Iu. V.) 863.
- Mikhailov, G. A. Analysis of Block Diagrams for Serial Electronic Computers 1156.
- Mikhailovskii, V. N. and Iu. I. Spektor. The Problem of Matching Magnetic Amplifiers of the "Second Harmonic" Type to a Load - 593.
- Certain Problems in the Theory of Magnetic Amplifiers and Magneto-Modulation Probes of the "Second Harmonic" Type - 771.
- Minina, O. M. (see Krug, E. K.) 932.
- Morosanov, I. S. Methods of Extremum Control 1077. Nechaev, G. K. Certain Properties of Circuits
  - Containing Thermoresistances 793.
- Negnevitskii, I. B. (see Lipman, R. A.) 381, 491.
- Neimark, Iu. I. Oscillatory Processes (Ramp Action) in Relay Automatic Control Systems 29.

Novikov, A. I. Exponential Pulse-Time Converters - 802.

Oldenburger, R. Stabilizing Control Systems with a Special Signal - 429.

Ostrovskii, Iu. L. Extremum Regulation - 900.

- A Pneumatic Extremum Regulator - 1093.

Perov, V. P. Synthesis of Pulse Networks and Systems with Pulse Feedback - 1129.

Polonnikov, D. E. Input Circuit Design for Electronic Amplifiers in Self-Balancing Devices - 955.

Povarov, G. N. A Method for the Synthesis of Computing and Control Contact Circuits - 159.

Pshenichnikov, A. M. Supply-Voltage-Dependent Zero Shifts in Magnetic Null Detectors - 83.

A Static Transmitter Unit for Pulse-Frequency
 Telemetering Systems - 485.

Pugachev, V. S. Integral Canonical Representation of Random Functions and their Application in Deriving Optimal Linear Systems - 1017.

-(see Dostupov, B. G.) - 671.

Pul'er, Iu. M. Electrical Angular Errors and Residual Voltages in Inductive Computer Elements - 579.

Radchenko, A. N. Code Rings and their Uses in Remote Control Equipment - 809.

Raevskii, S. Ia. The Dynamic Accuracy of a Servo System Containing a Nonlinear Link with a Polynomial Characteristic - 1057.

Rodin, V. I. An Electric Analyzer for Contactor Circuits - 477.

Roginskii, V. N. The Synthesis of Mixed Relay Systems of Class II. - 1165.

Rozenman, E. A. On Optimum Transient Response in Power-Saturating Systems - 539.

Sadovskii, I. M. Graphical Determination of the Rotation-Induced EMF in Selsyn Systems - 509.

Sadovskii, A. S. An Induction Transducer of Increased Sensitivity for Recording Linear and Angular Movements - 852.

Sedykh, O. A. (see Vasil'eva, N. P.) - 1099.

Semikova, A. I. Scientific Seminar on Pneumatic and Hydraulic Automatics - 1193.

Shnaidman, M. A. An Electronic Analog to a Wire Potentiometer - 724.

Shumilovskii, N. N. (see Ageikin, D. I.) - 741.

- (see Gushchin, Iu. V.) - 863.

1077.

on)

Simoiu, M. P. Determining the Coefficients of Transfer Functions for Linearized Automatic Control Elements and Systems - 556.

Slepushkin, E. L. Stable Operation of Two-Phase Induction Motor with Negative Velocity Feedback -171.

Sokolov, A. A. A Simplified Calculation Method for a Transistor Amplifying Stage - 1182.

Solodovníkov, V. V. (see Batkov, A. M.) - 411.

Sotskov, B. S. Criteria for Evaluation of Electromagnetic Relays - 281.

Spektor, Iu. L (see Mikhailovskii, V. N.) - 593, 771.
Subbotina, G. V. Characteristics of Magnetic Materials for Use in Magnetic Amplifiers Operating at Audiofrequencies - 972.

Suvorov, G. B. (see Belevich, K. V.) - 979. Svoboda, F. Synthesis of Relay Circuits with the

Aid of Machines - 265.

Tel'ksnis, L. A. (see Leonov, Iu. P.) - 1032. Teodorchik, K. F. (see Bendrikov, G. A.) - 515.

Tolokonnikov, M. I. (see Gushchin, Iu. V.) - 863. Tsukernik, L. V. Generalization of the Dynamic

Equations for a Complex Power System and a Stability Analysis by Electronic Computer - 51.

Tsypkin, Ia. Z. Correction of Pulse Regulation and Control Systems - 121.

Vasil'ev, R. R. (see Bakhmet'ev, M. M.) - 403. Vasil'eva, N. P., and M. A. Boiarchenkov. Design Aspects of Multistage Magnetic Amplifiers - 715.

- and O. A. Sedykh. Design of Magnetic Ampliflers to a Set Supply Voltage - 1099.

Voronov, A. A. An Approximate Determination of the Self-Oscillation Startup Process in Certain Nonlinear Automatic Control Systems - 683.

Zakharov, V. K. (see Baida, L. L) - 778.

Zalmanzon, L. A. Some Aspects of Pneumatic Extremum Controller Design - 93.



# January, 1957

	TABLE OF CONTENTS		
		Page	Russ. Page
1.	The Approximate Derivation of Partial "Sliding" Periodic Modes in Relay Control Systems. In. V. Dolgolenko	1	3
2.	Oscillatory Processes (Ramp Action) in Relay Automatic Control Systems.  Iu. l. Neimark	29	27
3.	Study of Pulsed Contactor Automatic Control System Dynamics. V. P. Kazakov	37	34
4.	Generalization of the Dynamic Equations for a Complex Power System and a Stability Analysis by Electronic Computer. L. V. Tsukernik	51	47
5.	Transients in Contactor Systems. Ia. I. Makler	63	59
6.	A Method of Determining Desired Log Frequency Characteristics, P. S. Matveev	75	71
7.	Supply-Voltage-Dependent Zero Shifts in Magnetic Null Detectors.  A. M. Pshenichnikov	83	78
8.	Determination of Hydraulic Loss Coefficients in Throttle Resistances in Hydraulic Systems. I. N. Kichin	87	81
9.	Some Aspects of Pneumatic Extremum Controller Design. L. A. Zalmanzon	93	87
10.	Comments on A. V. Maiorov's Article "Raising the Operational Safety of Automatic Controls." (Automation and Remote Control, 16, 5, 1955).  V. A. Andriushchenko	99	92
	Chronicle		
11.	Automatic Control Congress in Heidelberg	101	93

February, 1957

		Page	Russ.
1.	Determination of Periodic Modes in Systems with Piecewise-Linear Characteristics, Composed of Segments Parallel to Two Specified Straight Lines. M. A. Aizer-	,,	
	man and F. R. Gantmakher	105	97
2.	Correction of Pulse Regulation and Control Systems. Ia. Z. Tsypkin	121	111
3.	Two-Channel Automatic Regulation Systems with Antisymmetric Cross Connections.  A. A. Krasovskii	139	126
4.	Speed Regulation of Three Phase Induction Motors Using a Bridge-Type Transducer.  V. S. Kulebakin and S. M. Domanitskii	151	137
5.	A Method for the Synthesis of Computing and Control Contact Circuits. G. N.  Povarov	159	145
6.	Stable Operation of Two-Phase Induction Motor with Negative Velocity Feedback.  E. I. Slepushkin.	171	163
7.	Reducing the Lag of Magnetic Amplifiers by Introducing Derivative Feedback.		
	O. I. Aven	191	174
	Chronicle		
8.	Session of the Academy of Sciences of the USSR on Automatization	199	182

### March, ,1957

		_	Russ.
		Page	Page
1.	Determination of Periodic Modes in Systems with Piecewise-Linear Characteristics Composed of Segments Parallel to Two Specified Lines. II.		100
*	M. A. Aizerman and F. R. Gantmakher	213	193
2.	On the Calculation of the Correlation Function of a Stationary Random Process		
	from Experimental Data. B. N. Kutin	221	201
3.	Investigation of Simplest Relay Servo System. G. V. Gerkhen-Gubanov	247	223
4.	Improving the Dynamic Properties of Automatic Regulation Systems with the Aid		
	of Aperiodic Feedback. S. Ia. Berezin	253	229
5.	Synthesis of Relay Circuits with the Aid of Machines. F. Svoboda	265	240
6.	Criteria for Evaluation of Electromagnetic Relays. B. S. Sotskov	281	256
7.	Simplified Calculations for Magnetic Amplifiers with Iron-Nickel Alloy Cores.  N. A. Kaluzhnikov	287	262
8.	Analytic Expression for the Static Characteristic of the Measuring Element of a		
	Choke Regulator. E. A. Iakubaitis	293	267
9.	Transients in a Transistor Switching Circuit. N. I. Brodovich	299	273
10.	Diagram for Determining the Real Frequency Characteristic from Open-Loop Loga-		
	rithmic Characteristic of an Automatic-Regulation System. Iu. M. Astapov	307	280
	Discussions		
11.	Remarks on Article by A. A. Pervozvanskii. V. L. Inosov	309	282
	Chronicle		
12.	Scientific Seminar Held in Kiev on the Theory of Automatic Regulation	314	285

# April, 1957

			Russ.
		Page	page
1.	Use of Memory Device to Improve the Stabilization of Automatic-Regulation  Systems with Limited Servo Motor Speed. V. A. Kotel'nikov	321	289
2.	Analysis of Errors in the Determination of the Average Value of a Random Quantity and of its Square, Due to Finite Time of Observation. A. E.	005	204
	Kharybin	335	304
3.	Analytical Investigation of the Stability of an Electromechanical Converting		
	Device. I. M. Makarov	347	315
4.	Certain Problems in the Construction of Multichannel Automatic Regulation		
	Systems, V. P. Kazakov	357	324
5.	Multiplying and Dividing Device Employing Thyrites. A. A. Maslov	367	336
6.	Theory of the Halfwave Magnetic Amplifier, I. $\underline{R}$ , A. Lipman and I. B. Negnevitskii	381	349
7.	Information Criteria for Evaluating Telemetering Systems. M. M.		
	Bakhmet'ev, R. R. Vasil'ev,	403	371
8.	Letter to the Editor, I. Iu. Klugman, and Ia. L. Litmanov	409	376

May, 1957

		Page	Russ.
1	A Method of Determining the Optimum Characteristics for One Class	0	1-0
1.	of Self-Adapting System. A. M. Batkov and V. V. Solodovníkov	411	377
2.	Stabilizing Control Systems With a Special Signal. R. Oldenburger	429	392
3.	Pulse Stabilization of Relay Automatic Control Systems. N. A. Korolev	435	397
4.	The Design of Linear Follower Systems from the Criterion of Minimum Practical Limiting Reproduction Error. K. I. Kurakin	447	409
5.	An Operational Amplifier Without Stabilized Power Supplies.  V. M. Evseev	467	427
6.	An Electronic Analyzer for Contactor Circuits. V. I. Rodin	477	437
7.	A Static Transmitter Unit for Pulse-Frequency Telemetering Systems.  A. M. Pshenichnikov	485	444
8.	Theory of the Halfwave Magnetic Amplifier. II. R. A. Lipman and I. B. Negnevitskii.	491	449
9.	Graphical Determination of the Rotation-Induced EMF in Selsyn Systems. I. M. Sadovskii	509	466
10.	The Theory of Derivative Control in Third-Order Linear Systems.  G. A. Bendrikov and K. F. Teodorchik	515	471
	BIBLIOGRAPHY		
11.	Titles of Soviet and Foreign Papers on Automatic Control and Related Topics in 1955. 1. General Topics	519	474

## June, 1957

			Russ.
		Page	page
1.	On Optimum Transient Response in Power-Saturating Systems. E. A.  Rozenman	539	497
2.	Determining the Coefficients of Transfer Functions for Linearized Automatic Control Elements and Systems. M. P. Simoiu	556	514
3.	Noise Stability of Frequency Modulated Systems. V. A. Kashirin	572	529
4.	Electrical Angular Errors and Residual Voltages in Inductive Computer Elements. Iu. M. Pul'er	579	536
5.	The Problem of Matching Magnetic Amplifiers of the "Second Harmonic"  Type to a Load. V. N. Mikhailovskii and Iu. I. Spektor	593	551
6.	Block Diagrams for Magnetic Amplifiers with "Hard" and "Soft" Feedback Loops. L. A. Grigorian	603	560
7.	The Computation of Nonlinear Networks by the Method of Transformation (Transfiguration) and a Certain Error Which Arises in the Application of this Method. P. A. Ionkin	620	574
8.	Bibliography	634	578

# July, 1957

		Page	Russ. Page
1. Conditionally Stable Co	ontrolled Systems (One Class of Optimal Controlled		
System). A. M. Leto	<u>v</u>	649	601
	al Linear Dynamic System from an Extremum Cri- Particular Form of Functional, N. I. Andreev	665	615
System of Ordinary D	mining the Distribution Law for the Integral of a Differential Equations Containing Random Para- pov and V. S. Pugachev	671	620
		011	020
* *	mination of the Self-Oscillation Startup Process Automatic Control Systems. A. A. Voronov	683	631
0	Ultrashort Waves for Measuring the Level of a Liquid  B. Brodskil	695	640
6. The Layout of Telemed	chanics Lines with Distributed Objects. V. A. II'in	708	653
0 1	istage Magnetic Amplifiers. N. P. Vasil'eva and	715	660
	o a Wire Potentiometer. M. A. Shnaidman		669
9 Operational Design of I	Reliability in Systems Containing Many Elements.		
	· · · · · · · · · · · · · · · · · · ·	733	678
10. A Three-Phase Magnet	ic Amplifier. V. V. Gorskii	736	681
	tive Emissions in Automatic Measuring Devices. D. I.	741	686

# August, 1957

			Russ
		Page	Page
1.	Improvement of the Static Characteristic of a Pneumatic Relay by Means of Flow Restrictors of Constant Pressure Drop. V. N. Dmitriev	744	689
2.	Some Methods of Stabilization and Control of Low Flow Rates of Operating Liquid in Hydraulic Automatic Systems, I. N. Kichin	757	702
3.	Certain Problems in the Theory of Magnetic Amplifiers and Magneto-Modulation Probes of the "Second Harmonic" Type. V. N. Mikhailovskii and Iu. I. Spektor	771	716
4.	Choice of Mode and Calculation of Electronic Voltage Stabilizer. L. I. Baida and V. K. Zakharov	778	724
5.	Certain Properties of Circuits Containing Thermoresistances. G. K. Nechaev	793	740
6.	Exponential Pulse-Time Converters. A. I. Novikov	802	749
7.	Code Rings and Their Uses in Remote Control Equipment. A. N. Radchenko	809	756
8.	Calculations on Electromagnetic Systems Using Electrical Analogs. S. A. Aleskerov	815	764

# September, 1957

	TABLE OF CONTENTS		
		Dage	Russ
		Page	Page
1.	The Motion of a Loaded Hydraulic Actuator with a Feedback Loop. V. A.  Khokhlov	823	773
2.	A Relay Automatic Position Control System Using a Compound-Wound Motor.		
	V. V. Gorskii	832	781
3.	Circuit Design for AC Magnetic Amplifiers . N. A. Kaluzhnikov	843	792
4.	An Induction Transducer of Increased Sensitivity for Recording Linear and Angular Movements. A. S. Sadovskii	852	802
5.	Use of Radioactive Emission in Automatic Control Devices. Iu. V. Gushchin, L. V. Mel'ttser, M. I. Tolokonnikov and N. N. Shumilovskii	863	814
6.	Evaluation of Electronic Integrators. B. Ia. Kogan	888	841
7.	A Magnetic Relay Using Ferrites. G.D. Kozlov	894	847
	Review		
8.	Extremum Regulation. Iu. I. Ostrovskii	900	852
	Bibliography		
9.	A List of Soviet and Foreign Literature on Computer Topics for 1955	908	859

### October, 1957

		Page	Russ. Page
1.	A Method of Producing Complex Control Laws Using Only the Error Signal or Controlled Coordinate Plus their First Derivatives. S. V. Emel'ianov	921	873
2.	The Effect of Certain Nonlinear Characteristics in the Elements of an Isodrome Regulator on the Transient Response of an Automatic Control System. E. K.  Krug and O. M. Minina	932	886
3.	Single-Input Nonlinear Converters. L. V. Medvedev, A. A. Fel'dbaum and L. N. Fitsner.	945	899
4.	Input Circuit Design for Electronic Amplifiers in Self-Balancing Devices. D. E. Polonnikov	955	911
5.	Design of Magnetic Circuits and AC Coils in Accordance with Set Parameters. B. K.  Bul'	962	918
6.	Characteristics of Magnetic Materials for Use in Magnetic Amplifiers Operating at Audiofrequencies. G. V. Subbotina	972	927
7.	A Radio Remote Control System for Oil Fields. K. V. Belevich, V. P. Demeshin, V. A. Il'in and G. B. Suvorov	979	934
	Review		
8.	Throttle-Controlled Hydraulic Amplifiers. V. A. Khokhlov	982	937
9.	Leningrad Seminar on Automatic Control Theory (1955-6). E. N. Fomina	991	947
10.	Seminar on the Engineering Applications of Mathematical Logic (1955-7).  N. S. Koval'	995	950

## November, 1957

	Page	Russ. Page
1. Growth of Automation in the USSR (1917-1957)	999	953
2. On the Theory of Optimum Regulation. N. N. Krasovskii	1005	960
3. Integral Canonical Representation of Random Functions and their Application in Deriving Optimal Linear Systems. V. S. Pugachev,	1017	971
4. Determination of the Distribution Law Parameters for a Random Function from Limited A Priori Data. Iu. P. Leonov and L. A. Tel'ksnis	1032	985
5. Approximate Determination of the Output Coordinate Probability Characteristics for Nonlinear Automatic Control Systems. B. G. Dostupov	1045	999
6. The Dynamic Accuracy of a Servo System Containing a Nonlinear Link with a Polynomial Characteristic. S. Ia. Raevskii	1057	1010
7. Some Aspects of the Switchovers in Nonlinear Automatic Control Systems with Piecewise-Smooth Nonlinear Element Characteristics. M. A. Aizerman and		
F. R. Gantmakher	1065	1017
8. Methods of Extremum Control. I. S. Morosanov	1077	1029
9. A Pneumatic Extremum Regulator. <u>Iu. I. Ostrovskii</u>	1093	1045
10. Design of Magnetic Amplifiers to a Set Supply Voltage. N. P. Vasil'eva and O. A. Sedykh	1099	1052

December, 1957

### TABLE OF CONTENTS

	Page	Russ.
1. Transient and Steady-State Processes in Pulse Systems with Abruptly Changing Variable		
Parameters. F.M. Kilin	1109	1061
2. Synthesis of Pulse Networks and Systems with Pulse Feedback. V.P. Perov	1129	1081
3. On the Synthesis of Structures of Multiple-Looped Control Systems Including Elements with		
Lags. M.V. Meerov	1146	1098
4. Analysis of Block Diagrams for Serial Electronic Computers. G. A. Mikhailov.	1156	1109
5. The Synthesis of Mixed Relay Systems of Class II. V.N. Roginskii	1165	1120
6. Evaluation of the Region of the True Periodic Solution Found Approximately by the Har-		
monic Balance Method. I.V. Glatenok	1175	1132
7. A Method of Calculating the Operational Reliability of Apparatus. G.V. Druzhinin	1179	1136
8. A Simplified Calculation Method for a Transistor Amplifying Stage. A.A. Sokolov	1182	1139
Discussion		
9. Some Comments on Maiorov's Paper. N.M. Margolis	1186	1142
10. Increasing the Reliability of Automatic Regulators. A.V. Maiorov	1189	1144
Review		
11. Atabekov's Book "Harmonic Analysis and the Operator Method." Kh.I. Cherne	1191	1146
Chronicle		
12. Scientific Seminar on Pneumatic and Hydraulic Automatics. A.I. Semikova	1193	1148
Bibliography		
13. Soviet and Translated Literature on the Theory of Rela; Systems for 1956. Compiled by		
G.N. Povarov	1196	115
INDEX TO VOLUME XVIII, 1957		
Tables of Contents, Numbers 1-12	1199	

